

FY 2004 – FY 2006 USGS Texas Activities for NPS I&M

FY 2004 Activities

Rio Grande

Five reaches in Big Bend National Park were visited in February of 2004. The reaches were the same reaches sampled in September of 2003. This repeat sampling was done to provide seasonal fish community data for the reaches in Big Bend National Park. All reaches were successfully electrofished using barge or backpack units, seined, and overnight gill and fyke nets were set.

Devils and Pecos Rivers

Fish community surveys were done at two reaches each on the Devils River and Pecos River upstream of Amistad International Reservoir in April of 2004. The most downstream reach on the Devils River is located 0.1 miles downstream of the weir at the International Boundary and Water Commission Gauging Station at Pafford Crossing on the Devils River Ranch. The upstream reach on the Devils River is located 0.2 miles upstream of confluence with Dolan Creek, and upstream of Dolan Falls on the property of the Texas Nature Conservancy. The downstream reach on the Pecos River is 0.1 miles downstream of International Boundary and Water Commission Gauging Station near Langtry. The upstream reach on the Pecos River is located 0.1 miles downstream of Highway 1024 bridge north of Langtry.

A reach was established at each site as a multiple of channel width, and overnight gill and fyke sets were made. A barge electrofishing unit was used at each reach to make two passes, and seine hauls were done using an equal-effort by habitat method.

Identification and Permanent Repository of Specimens

Collected fish were identified on site in the field or preserved in 10% buffered formalin pending identification in the laboratory. Preserved fish were returned to the USGS in Austin and sorted and identified. After this initial sorting and preliminary identification, the fish were taken to Dr. Dean Hendrickson with the University of Texas Texas Natural History Collection for verification of the preliminary identifications, and permanent curation.

Fish Data

All fish and associated ancillary data from the fish assemblage surveys described above were provide to the National Park Service's I&M Program in a format provided by the NPS.

FY 2005 Activities

USGS staff continued to interact with NPS I&M staff in the fall of 2005 to ensure that the fish data were provided to NPS I&M in the proper format, and that the data were complete.

USGS staff provided a draft copy of the report “Status of Fish Communities in the Rio Grande, Big Bend National Park, Texas – Comparison Before and After Spring 2003 Period of Low Flow” for NPS review in December of 2004. The report went to press in the late summer of 2005.

Copies of the report have been provided to the Chihuahuan Desert I&M Coordinator, and to Natural Resource Staff with Big Bend National Park.

FY 2006 Activities

USGS staff are continuing fish assemblage survey activities in the Devils River, Pecos River, and Rio Grande upstream of Amistad International Reservoir under the USGS and National Park Service Water Quality Partnership Program. Data from this project and data from I&M activities will be compiled for a more comprehensive assessment of fish communities in the Rio Grande and tributaries in Texas.

USGS staff will provide a draft report to NPS for review tentatively entitled “Status of Native Fishes of the Rio Grande, Devils River and Pecos River in National Park Service Managed Areas in Texas” by September 30, 2006. This report will be published in the fall of 2006 (FY 2007). A final report dealing with the status of fishes, benthic macroinvertebrates, and riparian vegetation in the lower reaches of the Devils, Pecos, and Rio Grande will be published in late FY 2007.

Recent USGS publications dealing with aquatic biota in Rio Grande, Texas

Moring, J.B., 2002, Baseline assessment of instream and riparian-zone biological resources on the Rio Grande in and near Big Bend National Park, Texas: U.S. Geological Survey Water-Resources Investigations Report 02-4106, 33 p.

Moring, J.B., 2005, Status of fish communities in the Rio Grande, Big Bend National Park, Texas --- Comparison before and after spring 2003 period of low flow: USGS Scientific Investigations Report 2005-5209, 11 p.